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ABSTRACT

Though teaching and research are the core activities of the academic profession, little evidence exists to link these two core areas, and faculty are torn between the competing obligations. Initial steps taken to describe the scholar, to develop a model, and to investigate the potential of moving toward a separate integrated entity are presented. The objectives in this regard are: (1) to determine faculty interest in integrating teaching and research; (2) to begin developing a definition of the scholar by identifying component parts; (3) to delineate these component parts; and (4) to test and evaluate interventions designed to move in the direction of the goals and ideals proposed for the scholar. In a survey at a doctoral granting institution, 65% of the faculty indicated a strong desire to integrate teaching and research. The scholar model, while still in its development, shifts the focus of activities from those that question the relationship between teaching and research to those that assume that relationship and seek to define it. The scholar model has the following integrated characteristics: disseminating knowledge, integrating knowledge, discovering knowledge, communicating knowledge, and applying knowledge. The four types of activities in which research is trying to make the model effective are: graduate training; activities utilizing and implementing the scholar goals; activities that serve to enhance characteristics of the scholar; and moving the institutional reward system toward reflecting the model. Contains 8 references. (SM)

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The Scholar: Integrating teaching and research in higher education

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Adam's Mark Hotel in St. Louis, Missouri, November 3-6, 1988. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Although teaching and research have long been acknowledged as the core activities of the academic profession (Parsons and Platt, 1973), little evidence exists to link these two core areas. Reports indicate that at many colleges and universities, faculty are torn between the competing obligations of their academic work roles (Boyer, 1987). Seeking to recognize and support these core activities, some higher education institutions have responded by creating a two tiered system varying along a continuum of teaching to research (Clark, 1988). The result of different places of work separated along a teaching-research dimension is often a teaching faculty isolated from the research faculty; with students being the most obvious, but not only, casuality. On the other hand, other institutions which require faculty to carry out, or balance, aspects of both roles have found these demands impinging upon faculty satisfaction and well-being (McMillen, 1986).

Empirical investigations also have demonstrated little relationship between these two activities. A meta-analysis of 29 of 43 published studies concluded that "on the whole, scholarly accomplishment of research productivity of college and university faculty members is only slightly associated with teaching proficiency" (Feldman, 1987). This conclusion was based on a consistent but often statistically insignificant pattern of results indicating a positive relationship between various measures of activity. Perhaps, as Feldman and others posit (Centra, 1983; Linsky and Straus, 1975), an important

interpretation of these studies in the aggregate is that "productivity in research does not seem to detract from being an effective teacher (Feldman, p. 275)."

Yet, the discrepancy between a desired balance of scholarly activities and the reported lack of success in integrating or finding links between constituent parts has done little to diminish our belief that good research and good teaching somehow go hand in hand. A number of researchers (Friedrich and Michlak, 1983; Feldman, 1987) have proposed that the most likely problem lies in the conceptualization of the question and the resulting form of measurement. The most profitable line of inquiry, to date, has been the suggestion of mediating variables, or intervening factors, that may serve to link the activities of teaching and research. By asking if research enhances or detracts from teaching, previous studies have increased our understanding of such links by pointing to common intervening variables such as organization and knowledge of subject. Yet, by investigating a one way relationship, these studies fall short of addressing the "integration inability gap." If teaching and research are to hold equal weight in the professional life of the academic, the reciprocal question to that now being asked (i.e., does research enhance or detract from teaching?) also must be explored; i.e., does teaching enhance or detract from research? Considering both questions helps to conceptualize the actuality of a two way relationship between teaching and research. The importance of such a framework is its potential to identify those

conditions that work for and against integration.

To propose a new model in which teaching and research hold equal weight means that both activites must be recognized not merely as points along a continuum, but as an integrated, separate entity. This suggests that while we have come to accept as normal, radically different places of work along a teaching-research dimension (Clarke, 1987); this does not have to define all of the possibilities for higher education. Might not there also be a place for institutions that strive to integrate the two?

The development of such a model must begin by investigating the possibility of transcending the dichotomy of teaching and research by enhancing the similarities of each role. In this way, teaching and research interests, motivation and activities are placed in a complimentary context rather than a confrontational one.

Such a model is not meant to apply to all faculty or all institutions. Rather, it would provide an identity for some institutions and faculty; a direction for education and training; and a basis for establishing new and appropriate reward systems. As with any new concept, its name becomes problematic as one attempts to find a meaningful descriptor that does not carry confusing connotations. The term <u>scholar</u> has been selected because it can encompass those activities necessary for good teaching and research without forcing a total overlap between the two roles. In attempting to develop a model for the scholar in

higher education, we seek to describe those faculty and/or institutions that strive to integrate the roles and responsibilities of teaching and research, holding each equal in importance and similar in characterizing factors.

The purpose of this paper is to present initial steps taken to describe the scholar, to develop a model and to investigate the potential of moving towards this separate integrated entity. The objectives in this regard were established as:

1) to determine faculty interest in integrating teaching and research;

2) to begin developing a definition of the scholar by identifying component parts;

3) to delineate these component parts; and

4) to test and evaluate interventions designed to move in the direction of the goals and ideals proposed for the scholar.

Methods and Techniques

Before any discussions or presentations of the proposed scholar concept occured, a survey was designed to address the question: do faculty wish to integrate teaching and research? Within a Doctoral Granting I institution (Carnegie Classification, 1976), 65% of the total faculty (n = 840) responding to questions rated on a 5 point scale, indicated a strong desire for research and teaching to be integrated in their professional lives (5=very desireable; mean=4.2, sd=0.9). Yet, while faculty reported some success in incorporating research

activities into their teaching (5=very much; mean=3.2, sd=1.1), they had significantly less success ($t(499)=12.76$, $p<.0001$) incorporating teaching into their research (5=very much; mean=2.6, sd=1.1). While responses varied as a function of academic discipline, this pattern remained the same for all academic areas. It is interesting to note that these results reflect the direction of association reported in the literature, i.e., the relationship of research to teaching; with less emphasis placed on the relationship of teaching to research.

To assist in identifying those characteristics or categories which might comprise the scholar model, the goals of the project were discussed with E. Boyer of the Carnegie Foundation for the Advancement of Teaching. Dr. Boyer was asked to address ways in which teaching and research could be conceptualized so as to focus on their similarities. In a report to the faculty (Spring, 1988) the similarities or integrated characteristics for a scholar were presented as:

* Disseminating Knowledge
* Integrating Knowledge
* Discovering Knowledge
* Communicating Knowledge
* Applying Knowledge

Through content analysis of the Boyer address and a subsequent seminar (to be described), the integrated characteristic categories of a <u>scholar</u> were defined as:

<u>Disseminating Knowledge</u>: to articulate or present insights and discoveries to others.

<u>Integrating Knowledge</u>: to analyze and order relationships among concepts.

Discovering Knowledge: to form questions and generate new ideas and methods of investigation.

Communicating Knowledge: to present information for the purpose of exchange and critique.

Applying Knowledge: to extend ideas into practice.

Following the Boyer presentation an outside consultant, Robert Menges, was contracted to lead a seminar based on a small group discussion format for Social Science faculty. Additional seminars have been scheduled for Humanities and Science Faculty. (Preliminary analysis of the Science seminar may be available at the time of this paper presentation.) Seminars were designed to delineate the original scholar categories identified by Boyer; to assist in developing definitions of the scholar categories by identifying component parts; and to test and evaluate interventions designed to move in the direction of the proposed Scholar Model.

Two sources of data were analyzed. First, a written task was designed for one-half of the group to identify up to five abilities or skills needed to succeed as a researcher in a college or university setting; the other half of the group had the same task but were directed to identify the skills and abilities of a teacher in this setting. None of the respondents were aware that the type of task being completed differed in any way. Responses to these questions provided the basis for the ensuing discussion on whether research and teaching could be effectively integrated into the life of a university professor.

Content analysis on these open ended statements was performed and classifications were made into the predetermined scholar characteristic categories by two independent observers.

Following the seminar, a transcript of the discussion was prepared from a video tape of the session. Content analysis was again employed to identify component parts of the scholar categories. In this manner, content categories were constructed on the basis of a single theme: What are the characterisitcs of a scholar? Content categories constructed in this fashion should enhance reliability and validity of the scheme as it provides an explicit rationale not only for what is retained, but also for what is excluded from the analysis (Stone, et al., 1966). The results of these two measures are summarized in Table I. Clearly, given the homogeniety of the group (Social Scientists), its size (n=20), and its directed format, these results must be viewed with caution. Nevertheless, they do present a structure within which to observe and ask questions. In addition, they provide the beginning of a source of systematic observations. That is, the items delineating the scholar categories do provide a reasonable summary of identified abilities required for good teaching and/or research. The frequency of the responses also suggests a hierarchy of importance of the scholar categories. Namely, components falling within the categories "disseminating knowledge" and "integrating knowledge" were mentioned most frequently; followed in frequency by "discovering knowledge" and "communicating knowledge" components; and with the components of

"applying Knowledge" not mentioned very often.

Looked at in terms of the generating stimulus (i.e., teaching or research), points of initial similarity and differences can also be observed. For example, research generated more frequent responses than teaching in the "discovering" and "disseminating" knowledge categories; research and teaching generated similar frequencies in the "communicating" knowledge category; and teaching generated the most frequent responses in the "integrating" and "appl[illegible]nowledge categories. Within each category, components l[illegible]wise point to areas of perceived similarities and differences. For example, within the category "disseminating knowledge", articulating ideas and writing clearly, were more frequently identified for research activities while speaking well was more often identified as a part of teaching skills. Some of the more interesting observations from the analysis include: (a) under the category "integrating knowledge" analytical skills were more frequently identified with research but organization skills were more often identified with teaching; (b) under the category "communicating knowledge" almost equal frequency of response was generated for every component; (c) under the category "discovering knowledge" the ability to formulate relevant questions was more likely associated with teaching than research, but the ability to create effective approaches was more frequently associated with research than teaching; and (d) under the category "applying knowledge" few responses were generated overall in either domain; yet when

thought of as seeking implications for application a response was noted only for research.

It is important to point out that other factors which were perceived to be requisite to the successful implementation of the scholar model were detected in the analysis, but were unable to be coded into the scholar categories (see Table II). Personal characterisitcs, in particular, were often identified as important to successful teaching and research activities. Once again, the similarities and differences of the component items are of interest to the scholar concept. For instance, a passion for inquiry was noted for research, but not once mentioned in connection with teaching. On the other hand, self direction was mentioned in connection with teaching, but not for research. In light of the previous studies (e.g., Feldman, 1987; Friedrich & Michlak, 1983), it is interesting to note that the identification of organization skills as a common factor of teaching and research produced the same number of responses; and that institutional or external factors were identified as contributing most often to the research context.

Although still in a preliminary stage of definition, we are seeking to address the question: Is it possible to foster innovative ways for faculty to function as scholars? At this time, we are able to address only whether or not the initial seminar provides evidence of movement towards the scholar goals. A further analysis of the session looked at the number of comments expressed in support of the scholar model versus those

that identified barriers to this model. The analysis looked for the affective valence of comments across the session in two minute blocks. Specifically, the number of comments expressed in support of the scholar model versus identifying barriers to the scholar model were recorded and counted. Table III indicates that within a three stage format, participant comments moved from exclusively negative to very positive comments. A turning point appeared to be the at that time in the discussion when comments began to focus on the process rather than the product of teaching and research efforts. Once participants began to focus on both dimensions as opportunities or occasions for learning, adopting a scholar model began to seem feasible to them.

Conclusion/Discussion

This Scholar model, while still in its development, has shifted the focus of activities from those which question the relationship between teaching and research to those which assume that relationship and seek to define it. We have adopted this approach because our preliminary research has convinced us that faculty are seeking integration of teaching and research and the Scholar model gives us a context that promises to be productive in moving towards such integration. The Scholar model allows us to make observations on the perceived similarities of the factors involved in the actual processes of teaching and research; and then, by devising interventions to elicit the perception of these similarities, it provides the framework within which to evaluate the success of the interventions. As such, the model has expand-

ed the operational definitions of teaching and research and identified the component parts of these characteristics.

We may summarize and illustrate the position in three ways.

First, there is a conceptual issue. How should we <u>think</u> about the various roles that the University Professor is expected to play? In choosing the term "Scholar", we have attempted, from one point of view, to express the similarities among those roles, and, from another point of view to express our intention that these roles be synthesized into a unity that is more than simply the addition of one role to another. A university faculty member is a scholar, and scholarship involves both teaching and research (as well as service, we may add). Because the scholar may not exercise both roles at one time, but over time, the roles appear to be separable; and so it is not difficult to see how the not-yet-done might become the never-done. But this perception refers more to the "product" of teaching as distinct from the product of research; it does not necessarily apply to the factors involved in the processes. Or, at least, this is what the model suggests.

Second, what sort of model might concretize the thrust of the concept? Here we might be tempted to think of a straight line continuum, from teaching at one end to research at the other (if we focus for a moment on just these two of the three roles of a faculty member). In a straight line continuum, movement towards is always also movement away from; so this model reinforces the sense that one must choose; it is not an integrative model. We suggest, therefore, not a straight line

but a pyramid with triangular base: teaching at one vertex, research at another, service (to complete the list of tasks) at the third--with the Scholar at the apex, blending the three roles into a balanced, professional life. This model arises from seeing that it is not necessary that each of the three roles stand in opposition to the others. Our approach arises from the view that the tension among these roles may be creative, rather than destructive; our task is to understand how the truth of each may be preserved and lifted up in a synthesis that is truly new and not simply a pasting together of diverse obligations. This is, of course, an ideal. That is what a model is all about; it is intended to get us thinking in a certain direction. The proposal is a project, not an accomplished fact. The Scholar is projected as a balance of roles, with, perhaps a different mix, not only for different disciplines, but for indivudals as well. When we imagine a pyramid, we often think of a solid with equal sides. Of course, that is by no means necessary; the three sides of a triangular-base pyramid may all be different.

FInally, the Scholar model needs to be translated. Accordingly, let us briefly describe four types of activities in which we are currently involved to try to make this model effective.

1) Graduate training. Since the issues are systemic, we believe there cannot be any long-range approach that does not begin with the training of graduate students. Our initial attempt here is modest. We have been able to obtain the support of the

University to fund a model Teaching Fellows program. Here we have an intervention whose precise intention is to train junior professionals. Advanced graduate students who are close to or at the point of writing a dissertation are selected for a program of monitored teaching, the purpose of which is to assist them to integrate their teaching responsibilities with their research--and this at a critical point in their graduate careers. The Fellows are chosen from a variety of disciplinary backgrounds to participate in a three-pronged program: the home department monitors the subject; the Graduate School provides the common setting and sponsors formal and informal meetings, with emphasis on inviting in those faculty who are successful at the integration we seek; and the Fellows themselves provide the third intervention by sharing with each other their successes and frustrations in developing the life of a scholar.

2) We support activities that utilize and implement the scholar goals. One innovative example developed by one of our English faculty in reponse to the Scholar model has been a workshop for faculty, graduate, and undergraduate students on the role and value of teaching Chaucer in middle English rather than in translation. In this workshop, what was originally and ostensibly an issue about <u>teaching</u> quickly moved to include and to be nourished by issues of <u>research.</u>

3. We support and promote activities that serve to enhance characteristics of the scholar. One sort of example, drawn from our having identified the application of knowledge as a charac-

teristic of the scholar, is a proposal developed by one of our Teaching Fellows. The proposal is for graduate students to put on a cross-disciplinary conference in which they would report on their research to non-specialists (i.e., to undergraduates): in succinct, jargon-free language to explain why the research area was chosen, the findings, and especially the importance of this research to a variety of groups. Here the emphasis is on seeing in what ways the doing of research (its structure, purpose, importance), by reporting it, is translated into a teaching event.

4. We are involved in affecting the ways in which the institutional reward system may move towards reflecting this model. For example, at our Institution, a Task Force appointed by the Academic Vice-President has been working with all academic departments to develop a policy of "academic work-load" that would explicitly take into account the need to balance teaching and research.

TABLE I. Comparison of Abilities and Skills of Successful Researchers and Successful Teachers

	TEACHING	RESEARCH	total
DISSEMINATING KNOWLEDGE	(7) 35%	(13) 65%	20
articulate ideas	(3) 43%	(8) 62%	
write clearly		(4) 31%	
speak well	(4) 57%	(1) 7%	
INTEGRATING KNOWLEDGE	(12) 60%	(8) 40%	20
relationships	(5) 42%	(2) 25%	
analytic skills	(1) 8%	(4) 50%	
organization skills	(6) 50%	(2) 25%	
DISCOVERING KNOWLEDGE	(6) 40%	(9) 60%	15
ability to formulate relevant questions	(5) 83%	(5) 56%	
ability to create effective approaches	(1) 17%	(4) 44%	
COMMUNICATING KNOWLEDGE	(7) 54%	(6) 46%	13
interpersonal skills	(5) 71%	(4) 67%	
ability to give-and-take	(2) 29%	(2) 33%	
APPLYING KNOWLEDGE	(7) 88%	(1) 12%	8
seeking implications		(1) 100%	
expressing implications	(4) 57%		
translating results/practice	(3) 43%		

TABLE II. Personal and Institutional Factors Perceived as Requisites for Successful Teaching and Research

	TEACHING		RESEARCH	
PERSONAL FACTORS	(18)	%	(21)	%
passion for inquiry			(5)	24%
self-direction	(4)	22%		
disciplined thinking			(5)	24%
enthusiasm	(3)	17%	(1)	5%
organization skills	(6)	33%	(7)	33%
mastery of/currency with the field	(5)	28%	(3)	14%

INSTITUTIONAL/EXTERNAL FACTORS	(5)	%
resources	(2)	40%
outside funding	(2)	40%
outside commitments	(1)	20%

TABLE III. Directionality of Seminar Discussion: Can Research and Teaching Effectively be Integrated in the Life of a University Professor?

MINUTES	KEY WORDS	NEGATIVE	POSITIVE
STAGE I			
0 - 2	tension	X	
2 - 4	confusion	X	
4 - 6	decreased support	X	
6 - 8	insufficient evaluation	X	
8 - 10	substantively meaningless	X	
10 - 12	issues unclear	X	
12 - 14	subtle message?	X	
14 - 16	integration not feasible	X	
16 - 18	poor policies	X	
18 - 20	reward system entrenched	X	
STAGE II			
20 - 22	quantification stressed	X	
22 - 24	decision basis	X	
24 - 26	impact on individual	X	
26 - 28	integration possible?		X
28 - 30	strong cognitive base		X
30 - 32	similar skills/abilities		X
32 - 34	commonalities		X
34 - 36	discrepancy among disciplines	X	
36 - 38	difficulty/undergraduate	X	
38 - 40	limit research to teaching	X	
STAGE III			
40 - 42	learning elements		X
42 - 44	learning/integrative concept		X
44 - 46	best learning situtations		X
46 - 48	a learning process		X
48 - 50	change of attitude necessary	X	
50 - 52	teaching affords insights		X
52 - 54	each contributes to the other		X
54 - 56	change of attitude essential	X	
56 - 58	dialogical process		X
58 - 60	discovering meanings		X
62 - 64	disseminating knowledge		X
64 - 68	sharing elements to both		X
70 - 72	teaching central to research		X
72 - 74	concentrate on practice not product		X

Time Elapsed = one hour/fourteen minutes

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